# VIRGINIA'S WINTER PREPAREDNESS

# 2013



# Prepared by:

Secretary of Veterans Affairs & Homeland Security and Homeland Security Working Group on behalf of the Secure Commonwealth Panel Severe winter storms are a part of life in Virginia. Preparing for and managing a winter storm event requires a coordinated response from state and local agencies and private sector entities. State, local, and private emergency operations centers will maintain constant communication and coordinate action plans including pre-event preparedness measures for roadways, debris removal, and power restoration activities.



The Commonwealth has increased its ability to manage a winter storm, but the need for expanding capacity remains. Work continues on public outreach and education, increasing operational awareness capabilities, increasing sheltering facilities, and making prudent equipment investments. The Homeland Security Working Group and the Secure Commonwealth Panel will continue to coordinate action plans and proactively utilize the Commonwealth's resources to ensure an effective and timely response to winter weather.

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#### **OPERATIONS**

#### SECRETARY OF ADMINISTRATION:

The **Department of Human Resource Management** (DHRM) administers Policy 1.35, Emergency Closings, which provides guidelines for compensating employees during emergency closings of agency operations. DHRM also develops and implements the procedures used in determining the need to close or delay the opening of state agency day shift operations (7 a.m. to 6 p.m.) for offices located in the city of Richmond and the counties of Chesterfield, Hanover, and Henrico. In September, DHRM distributed its annual reminder to agencies that they communicate state and agency emergency closing procedures to employees. DHRM communicates the governor's closing decisions in the following ways: (1) by email to cabinet officials, agency heads, human resource directors, and back-up agency emergency contacts; and (2) public announcements on Richmond network television channels (ABC, CBS, and NBC), Clear Channel radio stations, the DHRM web site, and Twitter. DHRM has established and tested emergency closing system user accounts with all local media outlets.

#### SECRETARY OF AGRICULTURE AND FORESTRY:

The **Virginia Department of Forestry** (VDOF) provides a unique mix of response personnel and equipment to support winter storm emergencies. The VDOF coordinates directly with the Virginia Emergency Operations Center (VEOC) through the agency's own Command Center and works to compliment the activities of both the Virginia Department of Transportation (VDOT) and Virginia State Police (VSP).

The agency's fleet of 4x4 pickups and Hummer vehicles are a key resource for the rescue of stranded motorists, especially during heavy snow and ice events. Specialized chainsaw strike teams remain ready throughout the year and are available to either pre-position or respond in support of VDOT efforts to open the Commonwealth's road network following a major ice storm.

The VDOF's nationally qualified Incident Management Team (IMT) personnel have previous experience in managing large winter storm events and remain available to assist with command, planning, and logistical coordination of winter storm response and coordination at the local or state level.

#### **SECRETARY OF HEALTH AND HUMAN RESOURCES:**

The Virginia Department of Health (VDH) has 35 local health districts across the Commonwealth. Each District Director (a physician) coordinates health and medical support in his/her jurisdiction(s) during emergencies; and is assisted by an emergency planner. In support are four Regional Public Health Emergency Preparedness Teams, each comprised of a regional planner, trainer, epidemiologist, and public information officer. To coordinate hospital and health care preparedness and response, six Regional Healthcare Coordination Centers (RHCC) are in place, each supported by a regional coordinator and RHCC management team. Hospital and Long Term Care Facility

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operational status and resource requests are monitored by the RHCCs and VDH through a web-based situational awareness tool, the Virginia Healthcare Alerting and Status System (VHASS). Commercial power status, emergency power system and other facility resource needs are tracked via VHASS. Support for continuity of operations at healthcare facilities and, if necessary, evacuation of patients and staff will be coordinated by Emergency Support Function-8.

The VDH Office of Emergency Medical Services (OEMS) coordinates with the Commonwealth's six on-call EMS Task Forces for potential statewide reinforcement/response/deployment. At the state level, the VDH Office of Emergency Preparedness coordinates health and medical support through the VEOC. All VDH public health emergency preparedness personnel are prepared for statewide redeployment.

The VDH Office of Chief Medical Examiner (OCME) works with law enforcement to report an accurate count of event-related fatalities.

#### **SECRETARY OF PUBLIC SAFETY:**

The **Virginia Emergency Operations Center** (VEOC) shares information with other state agencies and localities through a crisis management information system (WebEOC) providing information and a user-defined operation picture (VIPER) to assist response partners with situational awareness during winter storms. The VEOC serves as the primary coordination point for state actions before, during, and after emergencies and disasters.

The Virginia Department of Emergency Management (VDEM) plans, trains, and coordinates with stakeholders to staff the VEOC with the Virginia Emergency Response Team (VERT). The number of students trained in the VERT has increased exponentially since 2010. In training year 2012, there have been 963 students trained, compared with 514 students in 2011. There has also been an increase in the number of VERT members who have completed National Incident Management System training (82% in training year 2012, compared to 79% in 2011). Overall, VERT members training in all components of the VERT has shown an increase during the recent year.

The development of the VEOC 101/201 VERT training manual and the VEOC 100 for Local Governments training manual has successfully demonstrated consistency in training efforts between members of the VERT and local emergency managers and responders.

Similarly, 24 hour-a-day linkages exist with the Virginia State Police (VSP) and with the Virginia Department of Military Affairs at its Joint Operations Center. The Virginia Department of Health Emergency Coordination Center (VDH ECC) may also be activated at the discretion of the State Health Commissioner/designee should an event pose an imminent or actual public health hazard. Examples of such events include a disruption in the ability of healthcare facilities to provide treatment services due to a large-scale power outage; a major disease outbreak requiring monitoring of status reports from Health Districts and hospitals; and, a major snowstorm requiring evaluation of options when road conditions prohibit a timely EMS response.

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When significant weather events are forecast for Virginia, the **Virginia State Police** (VSP) immediately assigns appropriate resources to manage potential traffic problems in the affected area. This includes assigning additional state troopers from specialty units to patrol interstate and primary highways to help motorists and to provide full law enforcement services.

The State Police coordinates its response with VDOT to assist motorists involved in accidents or stranded because of inclement weather. This coordination ensures the most rapid response of appropriate resources to any potential traffic problem and eliminates any potential duplication of services.

Should it become necessary to utilize additional State Police resources to manage an emergency situation, additional state troopers and equipment can be drawn from neighboring divisions quickly and efficiently.

The **Department of Military Affairs (DMA)** continues to review and update all of their plans, including their current Winter Operations Plans, and is prepared to mobilize in support of state and local authorities according to civil agency requests received via the VEOC. This mobilization capability has been enhanced by recent *Code of Virginia* amendments, which allow limited activation of guard assets in advance of an event. Lessons learned from prior winter storms have been incorporated into their plans.

Ongoing improvements in communications systems have produced a flexible and partially-hardened architecture of redundant military systems that are better able to withstand disaster effects and can operate across the interagency spectrum. This improvement, coupled with the military Joint Operations Center in Sandston and the completion of the relocation of the military plans and operations staffs to that location has significantly improved the ability of DMA to coordinate and engage in joint activities with other executive agencies of the Commonwealth.

DMA forces remain prepared to provide 10 categories of support to civil agencies in any scenario: Aviation, Command and Control, Chemical, Biological, Nuclear, Radiological, and high-yield Explosive Response, Civil Engineering, Medical, Communications, Transportation, Security, Logistics, and Maintenance.

The **Virginia Department of Fire Programs** (VDFP) offers localities and state agencies support for emergency command and coordination activities through the agency Mobile Incident Support Team (MIST). The MIST can provide personnel experienced in command or coordination functions who can serve as supplemental or augmentation resources for key incident management and command positions. This includes planning (documentation, resource tracking, situation status, and demobilization units), logistics, and/or operations support.

Resources can generally be mobilized and en-route within six hours. In addition to personnel, the agency can deploy up to four self-contained agency Mobile Incident Support Trailers, as well as several "large" military style tents. These units and tents can be used for command and coordination functions, providing a fully self-contained working platform for field operations or in support of an EOC, which cannot support additional personnel due to size, systems impairment, or damage. Two trailers can be

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configured for office operations including LAN capabilities with Internet connectivity and work stations for up to seven personnel each.

These trailers can provide capacity for operating in two separate locations or when combined to serve up to 14 personnel. The agency, through military surplus, has also obtained a diesel-powered 40kW generator, which is being configured to be used to provide the necessary electrical power to support multiple trailers, tents and/or other facilities. Two additional trailers can also be deployed to provide sleeping quarters or additional work space for personnel deployed as part of the MIST.

Additionally, other support resources can be deployed to support MIST operations making the MIST fully self-sustaining. The trailers may be requested without MIST personnel, however, an agency technician will be assigned to operate the unit's systems and maintain equipment. MIST resources can be requested through the VEOC or by contacting the VDFP Division Chief in each respective division.

#### **SECRETARY OF TRANSPORTATION:**

The **Virginia Department of Transportation** (VDOT) continuously reviews its snow and ice procedures especially in the following areas: Anti-icing, Road Weather Information System Expansion, Duty Officer Program, VaTraffic/511, VDOT Customer Service Center, Transportation Operations Centers, and Benefits of On-Call Meteorologist

A key component of the snow removal program is the incorporation of anti-icing principles into the snow and ice removal strategy and training of personnel in their use. Anti-icing is the process of deploying chemicals to prevent the bonding of snow/ice to the roadway. The agency will spray liquid salt brine on select interstate and primary roads before the storm to prevent the bond from forming. In the past, VDOT spread salt on the roads after there was a snow/ice accumulation. After the salt interacted with the snow/ice, salt brine would develop to break the bond, a method called de-icing. VDOT's nine districts have identified the roads for anti-icing this snow season. VDOT continues to purchase the necessary equipment and provide the necessary training for the frontline employees on the anti-icing procedures. These efforts require time and an uncoordinated release of travelers (workers, school buses, etc.) will complicate, negate or prevent these efforts.

Another key component to the anti-icing campaign is the availability of pavement forecasts and temperatures. This is obtained through a series of environmental sensor stations (ESS) collectively called the Road Weather Information System (RWIS). VDOT has 79 ESS sites, plus an additional 16 mobile video data platforms and has expanded these sites to several key locations such as the Springfield Interchange. VDOT is expanding the ESS through use of a meteorological contractor who reviews information from the RWIS sites as well as other data sources and provides VDOT with a pavement forecast and recommendations on pavement treatment. The meteorological contractor will also recommend additional RWIS sites to aid in forecasting.

VDOT has instituted the Duty Officer program in each VDOT district and staff is available in each district as well as Central Office on call 24/7 with authority to make

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operational decisions when a problem is encountered. This means there is only a three-level decision matrix. The first level is at the Area Headquarters. If the decision needs to be escalated, it passes to the Residency Level and then, if necessary, to the Duty Officer. The Duty Officer improves decision making by reducing action time.

VDOT operates five Transportation Operations Centers that monitor road conditions, identify snow-covered roads, and disseminate information to travelers. The operations centers stay in constant communication, and a VDOT liaison works within the VEOC to ensure a coordinated response from state resources and contractors. VDOT also operates a Transportation Emergency Operations Center at its headquarters, which coordinates information between the VDOT district, operations centers, and the VEOC. These facilities have backup generators to ensure they stay operational even in extreme weather conditions.

## **OUTREACH, PUBLIC EDUCATION, AND COMMUNICATION**



The Virginia Department of Emergency Management (VDEM) continues its work with several state agencies and the National Weather Service to promote Winter Preparedness Week (December 2-8, 2012) and an ongoing winter campaign. VDEM partners include VDOT, VDFP, VDH, VDSS, and VDOF, as well as state TV meteorologists, and the work is conducted as part of the Ready Virginia effort initiated in 2006. This program receives funding from Virginia's annual Department of Homeland Security grant process. The campaign provides citizens with information on understanding weather advisories; tips for protecting children, the elderly, and pets; and home heating tips. Citizens are advised to prepare an emergency supply kit, to make a family communication plan in order to coordinate evacuation and relocation with loved ones, and to listen to local warnings and instructions on the weather forecast. This information is provided to citizens on the Ready Virginia website www.ReadyVirginia.gov and in Spanish on the Listo Virginia website at www.ListoVirginia.gov.

A new mobile app, **ReadyVA**, is available for downloading to smart phones and other mobile devices. The app will help citizens learn about winter weather preparedness, and other emergencies, and give them an electronic means to make their emergency plan. The app will be promoted extensively by social and traditional media during the winter holiday season.

VDEM assists the Commonwealth's Spanish-speaking population by publishing pamphlets, press releases, and other information in Spanish. This work has included <a href="https://www.ListoVirginia.gov">www.ListoVirginia.gov</a>, a website that is a Spanish translation of the contents on <a href="https://www.ReadyVirginia.gov">www.ReadyVirginia.gov</a>. Promotions for Winter Preparedness Week and an ongoing

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winter campaign are translated into Spanish. Also, VDEM recently developed preparedness fliers in the top 10 languages spoken most frequently in Virginia in addition to English and Spanish. The fliers are available for download and use by local officials.

**VaTraffic** is VDOT's web-based incident, planned event, and weather reporting software system that feeds the 511 Virginia website and integrated voice recognition telephone platform. VaTraffic has greatly improved the road condition reporting capability of VDOT, which has resulted in improved traveler information.

VDOT provides weather advisories on current road conditions and weather forecasts. Travelers can easily access weather information by dialing **511** 24 hours-a-day, seven days a week. This information is also available on the website at <a href="www.virginiadot.org">www.virginiadot.org</a>. VDOT also provides 24/7 traffic updates on its Twitter site. VDOT also provides emergency responders with the ability to develop their own "video wall" of CCTV displays so that they can observe traffic conditions in and around incidents on the interstates or wherever VDOT has camera locations.

Customer Service Center (CSC) as the place to address concerns. Callers can obtain current road conditions or report unsafe conditions to the CSC representatives who then can relay that information directly to VDOT staff working on the event. Stakeholders — such as elected officials, developers, public works staff, etc. — will continue to have direct access to VDOT personnel through direct phone lines.

**NOVA Snow Plow Tracker:** VDOT is piloting new technologies, processes and equipment in northern Virginia to respond more quickly to the public before, during and after a winter storm. For example, VDOT will activate a Web tool introduced last January that tracks the status of plowing in heavily populated northern Virginia neighborhoods after it snows two inches or more.

The snowplow-tracker map is at <a href="http://novasnowplowing.virginia.gov/">http://novasnowplowing.virginia.gov/</a>. A video on how to use the website is available on VDOT's YouTube site at <a href="http://youtu.be/HMRaItZLgyo">http://youtu.be/HMRaItZLgyo</a>. More information on the specific tools VDOT will be using in northern Virginia is at

http://www.virginiadot.org/newsroom/northern\_virginia/2012/vdot\_has\_new\_tools61771.asp

Special Assistance for the Elderly: VDEM provides specialized information for the elderly on emergency preparedness for winter storms. This information is distributed through VDEM's website and through brochures provided to the elderly and their caregivers. VDEM works closely with the Virginia Department for the Aging (VDA) on preparedness education for the elderly. Additionally, the Health and Human Resources Emergency Response Working Group continues to coordinate response activities for the elderly and other populations with particular needs. VDH recognizes the importance of outreach to vulnerable populations. The status of VDH-licensed nursing homes and long-term care facilities are monitored by VDH through the Virginia Healthcare Alerting and Status System. Through this system, these facilities can be alerted to potential and actual emergency situations. VDH, through its network of Public Information Officers, is

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prepared to assist in assuring timely and consistent public service messages are coordinated and disseminated, as appropriate, to the media and public.

### MAJOR AREAS OF FOCUS

#### **COMMONWEALTH'S SHELTER INITIATIVE:**

Providing safe and accessible shelters during an emergency is a priority of the Commonwealth and our local partners. Localities have primary responsibility to assure sheltering for their residents and visitors in the event of an emergency. As demonstrated in the recent past, winter storm events would most likely trigger the opening of local shelters and warming centers, prompting action at the state level to coordinate provision of food services and public notification of shelter/warming center locations and hours of operation. State managed shelters stand ready to supplement local and regional resources; however, it is unlikely that such an event would warrant the financial investment necessary to open state managed shelters. State managed shelters require a Governor's State of Emergency Declaration, evacuation of residents across jurisdictional boundaries when the sheltering capability of neighboring host jurisdictions either has been, or is reasonably expected to be, exceeded and a mission assignment from the VEOC.

There are 17 sites potentially available across the Commonwealth to be used as state managed shelters which can house both general and functional needs (including special medical needs) populations; 9 of the sites have the capability to house common household pets and 11 sites have been retrofitted to accept emergency generator power through pre-installed generator quick-connects. These shelters are "big box" shelters. In total, these shelters have capacity to house over 20,000 displaced individuals and over 16,000 pets. The Virginia Department of Social Services (VDSS) in collaboration with the Virginia Departments of Health, State Police, Agriculture and Consumer Services, Rehabilitative Services, and Emergency Management, and each site have developed site-specific plans addressing protocols, roles, and responsibilities of each stakeholder agency.

Virginia Department of Social Services and other support agencies continue to work diligently to meet the current challenges facing the successful deployment of one or more state managed shelters.

Communications: Operation of state managed shelters sites requires use of several web-based applications (EWA Phoenix, WebEx, WebEOC, and VIPER) to facilitate day-to-day management and coordination functions. This capability is currently achieved through the availability of data communications infrastructure in place within the state managed shelters site. Previous experiences have identified major gaps with this approach. However, the recent state managed shelter exercise at Richard Bland College demonstrated that great success can be achieved when the Virginia Information Technologies Agency (VITA) is fully involved as a partner with the state managed shelters site.

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IT staff: VITA has limited staffing to support this effort, therefore communications planning and solutioning has not kept pace with the rest of shelter planning and has an opportunity to be improved on.

Staffing: VDSS, VDH, and the Virginia Department of Agriculture and Consumer Services (VDACS) will provide staffing support to the state managed shelters. For VDSS, staff in paybands 5 and above have been assigned emergency roles, and Adjunct Emergency Workforce staff also have been assigned. With these assignments, only 1/3 of the needed staffing has been filled. VDH continues to struggle to staff state managed shelters while also fulfilling their responsibility to support local shelters. VDACS has a Memorandum of Understanding with private non-profits to maintain the majority of their staffing needs, but each will require a response time that could be longer than the immediacy of an event, this is another area that has opportunity for improvement.

*Information Privacy*: To properly care for and assure the safety of evacuees, VDSS purchased the shelter management tool EWA Phoenix, but Commonwealth of Virginia information security and privacy standards have been a barrier to the effective deployment of the system.

Commodity Needs: In the event of a no or limited notice event, the Commonwealth is limited in its complement of basic shelter supplies and commodities needed to effectively open one or more state managed shelters or assist in supporting any number of local shelters. This issue and the others identified above are being reviewed and recommendations for improvement are being developed through a broader State Managed Shelter Project.

#### SECRETARY OF AGRICULTURE AND FORESTRY:

The Commonwealth of Virginia Emergency Operations Plan assigns responsibility to **Virginia Department of Agriculture and Consumer Services** (VDACS) for the implementation of the pet evacuation and sheltering of household pets and companion animals. During emergencies and disasters this responsibility is executed through Emergency Support Function (ESF) 11 (Agriculture and Natural Resources) and members of VDACS' Animal Sheltering Program.

To meet the Commonwealth's needs in pet sheltering VDACS continues to coordinate with VDSS, VSP, VDH, and state colleges and universities to develop plans and standard operating procedures to support the sheltering of approximately 16,749 pets in Virginia when the state managed shelters program is activated. VDACS places a large emphasis on enhancing local human evacuation capability by building sustainable local temporary emergency animal sheltering capability throughout the Commonwealth. VDACS assists local emergency managers and animal control through the provision of technical assistance on training, plan reviews and site assessments. Emphasis is placed on assisting localities as proven by responding to requests for assistance from localities during emergencies and disasters. VDACS continues to work closely with the Virginia State Animal Response Team (VA SART) to train, establish and exercise Community Animal Response Teams (CART) throughout the Commonwealth of Virginia. Currently, there are nine CARTs located throughout the state. CARTs are integrated animal disaster teams

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that increase the capability to respond to animal emergencies on the local, regional, state and federal level. These teams could be deployed to another area through Statewide Mutual Aid if they were not needed to assist their own communities.

**Virginia Cooperative Extension** (VCE) has been working to support the farming community in winter preparedness outreach through its Extension Disaster Education Network (EDEN) to ensure that farmers understand the potential impacts of winter storms and actions that can be taken to prepare their farms, family members, and livestock. More information on EDEN as well as links to local VCE offices can be online at http://www.ext.vt.edu/ and http://eden.lsu.edu/Pages/default.aspx.

VDACS has supplies for 800 pets stored at the Virginia Distribution Center in Sandston, Virginia to support pet sheltering activities across the Commonwealth. These caches will be utilized for the state managed pet shelters or localities that request these supplies through the VEOC request for assistance process. Supplies for 200 pets are sited on the Eastern Shore of Virginia in Accomack County. Additional supplies are available from non-governmental organizations, local pet supply trailers and caches.

#### SECRETARY OF HEALTH AND HUMAN RESOURCES:

The monitoring of medically fragile individuals within local emergency shelters, which are opened and operated by each local jurisdiction, is articulated within local emergency operations plans. In some jurisdictions, the local VDH health district is assigned this responsibility. For state managed shelters, the VDH Emergency Response Plan contains a State-Managed Shelter Health and Medical Services Annex which describes the management structure, coordination, activation, and operational support requirements necessary for the administration of a special medical needs component of a state-operated emergency shelter. This annex serves as a template for the development of detailed health and medical support plans that are tailored to each specific state managed shelter.

#### **SECRETARY OF PUBLIC SAFETY:**

Power outage during a winter storm increases the risk of hypothermia and other health risks, especially to the very young or elderly. In order to coordinate response actions, VDEM has a Dominion Power representative in the VEOC during power outage events and the State Corporation Commission coordinates with VEOC for electric cooperatives. These arrangements permit power restoration activities to be coordinated with road clearance activities, enhancing the efficiency of both. VDEM coordinates with the critical infrastructure sectors to develop priorities for power restoration to such facilities as hospitals, shelters, and drinking water utilities. Vital state facilities are equipped with stand-by generators or have contracts for generators to ensure minimal interruption in services.

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Appendix A details VDOT's snow winter budget, equipment, materials, and other statistical data that supports VDOT's preparedness and readiness for the 2012-13 winter season.

#### Equipment

2,424 pieces of state equipment, approximately 7,144 pieces of hired equipment, and 818 pieces of interstate contractor equipment are available for snow and ice control activities for the winter of 2012-13.

#### Materials

Supplies of snow and ice control materials, including 340,000 tons of salt, 95,000 tons of sand, 49,000 tons of treated abrasives, 440,000 gallons of liquid calcium chloride and 136,000 gallons of liquid magnesium chloride, are in stock. Supplies are replenished as they are used. To assist in these replenishment efforts, an additional 84 tons of magnesium chloride (50-pound bags) and 50 tons of calcium chloride are also in stock. In addition, VDOT has the capability of making salt brine at some facilities, with a total of 630,000 gallons of salt brine in inventory.

The amount of materials used during the winter of 2010-11, when the Commonwealth of Virginia experienced unseasonal low temperatures and three major storms, included 443,000 tons of salt and 88,000 tons of sand. In addition, VDOT used 684,000 gallons of liquid calcium chloride, 112,000 gallons of liquid magnesium chloride, and 84,000 tons of treated abrasives during 2010-11.

The amount of materials used during the winter of 2011-12, when the Commonwealth of Virginia experienced a mild winter, included 126,000 tons of salt and 20,000 tons of sand. In addition, VDOT used 200,000 gallons of liquid calcium chloride, 17,000 gallons of liquid magnesium chloride, and 18,000 tons of treated abrasives during 2011-12.

#### *Technology*

A statewide network of 77 weather sensors in roadways and bridges, including 22 mobile video data platforms, allows VDOT maintenance crews to quickly identify when and where road surfaces might be freezing.

#### Anti-Icing, Pretreatment, Snow Removal and De-icing of Roads

VDOT employs numerous snow-removal initiatives, such as pre-treating of roads and bridges with abrasives and brine. VDOT remains in constant coordination with state and local police authorities and has access to the National Weather Service.

#### Contractors and Staffing Levels

VDOT has 2,726 crewmembers for snow-removal operations. In addition, VDOT has outsourced the maintenance of the Commonwealth's interstate system by employing contractors. One of the main functions of these contractors is snow removal. Currently, contractors are working on all interstate highways as well as several arterial/primary roads. The contractors are required to report road conditions during snow-removal operations through the normal reporting mechanism, *VaTraffic*. They are included in preevent planning sessions in order to have the necessary equipment and manpower to ensure effective and efficient snow removal during a winter or emergency response event. VDOT monitors the snow-removal operations and reports immediately any

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problems that are observed to the contractor. After action reviews are conducted by VDOT with the contractor during which outstanding issues or concerns are addressed.

#### Cost

Average cost for a major statewide snow/ice storm affecting all nine districts and requiring full mobilization is approximately \$11 million per day.

VDOT has \$145 million budgeted for snow removal for the winter of 2012-13. This amount includes \$11.7 million for anti-icing, which is a proactive process to prevent the bonding of snow or ice to the pavement in advance of the storm.

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#### **Appendix C – VDSS Staffing Requirements**

State Managed Shelter Site	Capacity	Source of Workers*	Workers/ Management Needed Day Shift	Workers/ Management Needed Nights Shift	TOTAL Staff Needed per site **
Virginia Commonwealth University	2,064	VDSS and AEW	53	45	98
George Mason University	3,503	VDSS and AEW	81	67	148
James Madison University	1,034	VDSS and AEW	36	31	67
Meadow Event Park	2,071	VDSS and AEW	53	45	98
Northern VA Community College - Annandale	558	VDSS and AEW	26	22	48
University of Virginia	2,510	VDSS and AEW	86	70	156
Virginia Tech	2,604	VDSS and AEW	78	64	142
Virginia State University	464	VDSS and AEW	25	21	46
Virginia Military Institute	460	VDSS and AEW	25	21	46
Christopher Newport University	2,118	VDSS and AEW	54	46	100
Paul D. Camp Community College	361	VDSS and AEW	22	19	41
Richard Bland College	332	VDSS and AEW	21	18	39
University of Mary Washington	203	VDSS and AEW	17	15	32
College of William and Mary	1,461	VDSS and AEW	45	39	84
VA School for the Deaf and Blind	272	VDSS and AEW	20	17	37
Patrick Henry Community College	300	VDSS and AEW	21	17	38
Longwood University	623	VDSS and AEW	27	23	50
TOTALS	20,938		690	580	1,270

<sup>\*</sup>Yes indicates completion of retrofit for generator quick connect or full capacity generator on-site. No indicates site requires retrofit.

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<sup>\*\*</sup>Human Shelters will be staffed by VDSS personnel in pay bands 5 and above and augmented by the Adjunct Emergency Workforce (AEW) comprised of state employees from other state agencies who have registered to support State Managed Shelters (SMS).

<sup>\*\*\*</sup>Total staff needed to open all SMS sites is 1,320. Current deficit is 545. Personnel retirements, transfers, resignations, etc. are challenges in maintaining current assignments. As a result of these challenges, site specific staffing is a moving target.